

REMARKS

Claims **1-26** were pending in this application. According to the April 5, 2007 Final Rejection, claims **1-26** were rejected.

We have amended independent claim **1**, have amended dependent claims **6-9, 12, 20**, and **25**, and have added new independent claims **46** and **47** and new dependent claims **27-45** and **48-52** to recite particular embodiments that we, in our business judgment, have currently determined to be commercially desirable. We have canceled dependent claims **3-5, 10-11, 14-17, 21-24**, and **26**. Claim **9** has been amended in part to include limitations of canceled claims **10** and **11** and claim **25** has been amended in part to include limitations of canceled claims **3** and **4**. We will pursue the subject matter of the previously presented and canceled claims in one or more continuing applications. The amendments do not introduce any new matter.

Accordingly, the following claims are under consideration:

- Independent claims **1, 13, 46**, and **47**.
- Dependent claims **2, 6-9, 12, 18-20, 25, 27-45**, and **48-52**.

1.0 Response to the rejection of claims 13-24 and 26 under 35 USC § 112, first paragraph.

At page 2 of the Office Action, previously presented claims **13-24** and **26** were rejected under 35 U.S.C. § 112, first paragraph, as being directed towards single means claims. The rejection of previously presented claims **13-24** and **26** is improper because these claims are not single means claims.

Specifically, a single means claim is a “claim drafted in means-plus-function format which is not drawn to a combination.” *In re Hyatt*, 708 F.2d 712, 715 (Fed. Cir. 1983). A claim drafted in means-plus-function format is a claim that includes a limitation that invokes 35 U.S.C. § 112, sixth paragraph. MPEP § 2181(I) states in part that

[a] claim limitation will be presumed to invoke 35 U.S.C. 112, sixth paragraph, if it meets the following ... analysis:

(A) the claim limitations must use the phrase ‘means for’ or ‘step for;’ ...

With respect to ... prong [A] of this analysis, a claim element that does not include the phrase ‘means for’ or ‘step for’ will not be considered to invoke 35 U.S.C. 112, sixth paragraph.

Previously presented claims **13-24** and **26** do not include the phrases “means for” or “step for.” As such, none of these claims includes a limitation that invokes 35 U.S.C. § 112, sixth paragraph. In addition, the Office Action failed to indicate why these claims could still fall within the scope of 35 U.S.C. § 112, sixth paragraph. Accordingly, because claims **13-24** and **26** do not invoke 35 U.S.C. § 112, sixth paragraph (i.e., because none of these claims is drafted in means-plus-function format), none of these claims can be a single means claim. As such, the rejection of previously presented claims **13-24** and **26** under 35 U.S.C. § 112, first paragraph, as being directed towards single means claims is improper.

Regarding currently presented claims **13** and **18-20** and new claims **41-45**, which depend from claim **13**, these claims are also not single means claims and as such, are also proper under 35 U.S.C. § 112, first paragraph.

2.0 Response to the rejection of claims and 15 and 16 under 35 U.S.C. § 101.

At page 10 of the Office Action, previously presented claims **15** and **16** appeared to be rejected under 35 U.S.C. § 101 because the claims recite the “*apparatus of claim 25*,” while claim **25** recites a method. Claims **15** and **16** contained a typographical error and should have recited the “*apparatus of claim 26*.” Nonetheless, as indicated above, claims **15** and **16** have been canceled and as such, this rejection is now moot.

3.0 Response to the rejection of claims 13-24 and 26 under 35 U.S.C. § 101.

At pages 2-3 of the Office Action, previously presented claims **13-24** and **26** were rejected under 35 U.S.C. § 101 “because they are drawn to more than one statutory class of invention, i.e., a method and an apparatus, in the same claim and [are] therefore not within one of the statutory classes set forth by 35 U.S.C. § 101.” We respectfully disagree.

Specifically, independent claim **13** recites an “*apparatus comprising a computing device operable to perform the method of claim 1*.” Notably, claim **13** is directed at a single statutory class, an apparatus, and does not claim both an apparatus and method steps. Rather, claim **13** merely uses one statutory class of invention, (i.e., process limitations) to define another statutory

class (i.e., an apparatus). Notably, such a claim form is proper. Specifically, the MPEP states that “[t]here are many situations where claims are permissively drafted to include a reference to more than one statutory class of invention.” MPEP § 2173.05(p). As an example, the MPEP indicates that “[a] product-by-process claim, which is a product claim that defines the claimed product in terms of the process by which it is made, is proper.” MPEP § 2173.05(p)(I).

Accordingly, the rejection of previously presented claim **13**, and similarly claims **14-24** and **26**, under 35 U.S.C. § 101 as being drawn to more than one statutory class of invention is improper.

Regarding currently presented claims **13** and **18-20** and new claims **41-45**, if the Examiner maintains the rejection of these claims under 35 U.S.C. § 101 as being drawn to more than one statutory class of invention, we respectfully request that the Examiner explain why a product by process claim satisfies the requirements of 35 U.S.C. § 101 while claims **13**, **18-20**, and **41-45** do not.

4.0 Response to the rejection of claims 1-8, 13-20, and 25-26 under 35 U.S.C. § 103(a).

At pages 3-7 and 9 of the Office Action, previously presented claims **1-8**, **13-20**, and **25-26** were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lupien et al., U.S. Patent No. 5,689,652 (hereinafter Lupien) in view of Keith, U.S. Patent Application Publication No. 2004/0236614 (hereinafter Keith). As indicated, claims **3-5**, **14-17**, and **26** have been canceled.

As set forth in the MPEP, to establish a *prima facie* case of obviousness, (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, and (2) the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP § 2143.

Notably, a factual finding of a suggestion or motivation to modify a reference must be supported with substantial evidence of record. Novamedix Distrib. Ltd. v. Dickinson, 175 F. Supp. 2d 8, 9 (D.D.C. 2001); In re Zurko, 258 F.3d 1379, 1383-86 (Fed. Cir. 2001); In re Lee, 277 F.3d 1338, 1342 (Fed. Cir. 2002). In particular, conclusory statements regarding the factual question of motivation must be supported by evidence of record and without such

evidence, lacks substantial evidence support and is thereby insufficient to establish a *prima facie* case of obviousness. In re Lee, 277 F.3d at 1343-45; In re Zurko, 258 F.3d at 1385.

As further discussed below, the combination of Lupien and Keith fails to teach, suggest, or disclose all the limitations of any of claims **1, 2, 6-8, 13, 18-20, and 25**. In addition, the Examiner failed to provide any evidence of record to support a suggestion or motivation to modify Lupien in view of Keith.

4.1 The combination of Lupien and Keith fails to teach, suggest, or disclose all the limitations of any of claims 1, 2, 6-8, 13, 18-20, and 25.

Amended claim **1** recites in part a method comprising

receiving ... a plurality of bid-offer liquidity spreads from a plurality of market-markers; ...

calculating, based on [a] selected bid-offer liquidity spread, a crossing price; and

filling ... the order imbalance at the crossing price using liquidity provided by the market maker that provided the selected bid-offer liquidity spread.

In rejecting previously presented claim **1**, the Examiner indicated that Lupien does not disclose such limitations but rather, asserted that Keith discloses such limitations at paragraphs 65 and 66. Keith does not disclose the above limitations of claim **1**.

Specifically, Keith discloses at paragraph 65 that an “auction match” will occur at a match price that is “relative to a specified price, such as the midpoint of the buy-sell quote spread from an external market at the time the match starts.” Keith further discloses at paragraph 66 that “an institution can be guaranteed liquidity.” In other words, as disclosed at paragraph 23 of Keith, “[a] dealer sells match insurance to participants in an order matching process. If a participant's order is not matched in the match process, then the participant exercises the match insurance ... to obtain a contra-side execution from the dealer. Purchasing match insurance is similar to purchasing an option with a floating strike price; with the strike price being determined by the match price.”

Accordingly, Keith appears to disclose calculating a match price based on a buy-sell quote spread from an external market and obtaining a contra-side execution from a dealer to fill

an unmatched order at this match price. However, while the dealer may provide a contra-side execution to fill an unmatched order, Keith does not disclose that the dealer also provides the buy-sell quote spread from which the match price is calculated. As such, Keith does not teach, suggest, nor disclose “*calculating, based on [a] selected bid-offer liquidity spread, a crossing price; and filling ... the outstanding order imbalance at the crossing price using liquidity provided by the market maker that provided the selected bid-offer liquidity spread.*”

Because Lupien and Keith each fails to teach, suggest, or disclose the above limitations of claim 1, the combination of Lupien and Keith also fails to teach, suggest, or disclose claim 1.

Regarding claims 2, 6-8, and 25, these claims depend from claim 1 and as such, are nonobvious in view of Lupien and Keith for at least the same reasons as claim 1.

Turning to independent claim 13, this claim recites limitations similar to claim 1. As such, claim 13, in addition to claims 18-20, which depend there from, are nonobvious in view of Lupien and Keith for at least the same reasons as claim 1.

4.2 The Examiner failed to provide any evidence of record to support a suggestion or motivation to modify Lupien in view of Keith.

In rejecting previously presented claim 1, the Examiner merely asserted that it would have been obvious to a person of ordinary skill in the art to modify Lupien in view of Keith “in order to account for any discrepancies between the buy and sell orders. In weighting the crossing price, the system can maximize participation in the market, which increases both the liquidity and depth of the market.” However, the Examiner presented no evidence of record to support such statements. In addition, even assuming, *arguendo*, that the asserted statements were true, the Examiner presented no evidence of record to support the conclusion that the asserted statements would have prompted one of ordinary skill in the art to modify Lupien in view Keith. Accordingly, the Examiner failed to provide a suggestion or motivation to modify Lupien in view of Keith and as such, failed to make a *prima facie* case of obviousness with respect to the previously presented claims.

4.3 The Examiner misinterpreted the Court in *In re Kotzab* and misquoted the Court in *In re Clinton*.

At page 11 of the Office Action the Examiner responded to the arguments made in the Amendment of January 25, 2007 regarding the Examiner's failure to provide evidence of record to support the asserted suggestion or motivation to modify Lupien in view of Keith. Specifically, the Examiner relied on *In re Kotzab*, 217 F.3d 1365 (Fed. Cir. 2000), stating in part that a "suggestion, teaching, or motivation to combine the relevant prior art teachings does not have to be found explicitly in the prior art, as the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly in the references." Office Action, page 11.

The Examiner misinterpreted, in part, the Court in *In re Kotzab*, failing to further note that the Court also held that even though a teaching, motivation, or suggestion to combine references may be implicit from the prior art as a whole, the implicit showing must be supported with evidence of record. *In re Kotzab*, 217 F.3d at 1370 ("Whether the Board relies on an express or an implicit showing, it must provide particular findings related thereto. Broad conclusory statements standing alone are not 'evidence.'").

At page 11 of the Office Action the Examiner also relied on *In re Clinton*, 527 F.2d 1226 (CCPA 1976) in further responding to the arguments made in the Amendment of January 25, 2007. Here, the Examiner stated that in *In re Clinton*, the Court held that "[i]n many, if not most, situations, there is neither a motivation to make the modification clearly articulated in the reference nor an evident lack of motivation A judgment must be made whether 'a person of ordinary skill in the art would have had sufficient motivation to combine the individual [elements] forming the claimed [invention].'" Office Action, page 11.

We note that a review of *In re Clinton*, including page 1228 referred to by the Examiner, does not reveal the quoted text highlighted by the Examiner. Accordingly, we are unable to respond to the Examiner's assertions.

5.0 Response to the rejection of claims 9-12 and 21-24 under 35 U.S.C. § 103(a).

At pages 7-9 of the Office Action, previously presented claims 9-12 and 21-24 were rejected under 35 U.S.C § 103(a) as being unpatentable over Lupien in view of Keith and in

further view of Gary, U.S. Patent 6,618,707 (hereinafter Gary) and officially noted subject matter. As indicated, claims **10-11** and **21-24** have been canceled.

Because claims **9** and **12** depend from independent claim **1**, claims **9** and **12** are nonobvious in view of Lupien, Keith, Gary, and the officially noted subject matter for at least the same reasons as set forth above for claim **1**.

5.1 The Examiner failed to provide evidence of record to support a suggestion or motivation to modify Lupien and Keith in view of Gary.

In further rejecting previously presented claims **9-12** and **21-24**, the Examiner merely asserted that it would have been obvious to a person of ordinary skill in the art to modify Lupien and Keith in view of Gary “in order to maintain a certain degree of liquidity and order in the particular market. In doing so, users of the market can be assured that they are receiving a fair trading price.” However, the Examiner did not support such statements with evidence of record. In addition, even assuming, *arguendo*, that the asserted statements were true, the Examiner presented no evidence of record to support the conclusion that the asserted statements would have prompted one of ordinary skill in the art to modify Lupien and Keith in view of Gary. Accordingly, the Examiner failed to provide a suggestion or motivation to modify Lupien and Keith in view of Gary and as such, failed to make a *prima facie* case of obviousness with respect to previously presented claims **9-12** and **21-24**.

5.2 Improper taking of official notice.

In further rejecting previously presented claims **9-12** and **21-24**, the Examiner took official notice regarding the limitations of the claims (i.e., “*additional information as to a size of the crossing*,” “*information relating to an amount of imbalance of buyers and sellers*,” “*names of participating market makers*,” and “*a reduced securities buy price and an increased securities sale price*”). Officially-noted subject matter cannot be used as the primary basis for a rejection under § 103. In other words, official notice alone of what existed in the prior art is not permitted. A reference must be provided to show the scope and content of the prior art. See, e.g., In re Ahlert, 424 F.2d 1088 (C.C.P.A. 1969); In re Eynde, 480 F.2d 1364 (C.C.P.A. 1973); In re Pardo, 684 F.2d 912 (C.C.P.A. 1982). If the Examiner wishes to maintain the rejection of

currently presented claims **9** and **12**, it is requested that the Examiner provide documentary evidence to support the rejection. 37 C.F.R. 1.104(c)(2); MPEP § 2144.03(C).

In further rejecting previously presented claims **9-12** and **21-24** in view of the officially noted subject matter, the Examiner also merely asserted that it would have been obvious to a person of ordinary skill in the art to modify Lupien, Keith, and Gary in view of the officially noted subject matter “so that the market maker can profit put themselves in a position to facilitate the most amount of trading, which leads to a greater profit.” However, the Examiner presented no evidence of record to support such statements. In addition, even assuming, *arguendo*, that the asserted statements were true, the Examiner presented no evidence of record to support the conclusion that the asserted statements would have prompted one of ordinary skill in the art to modify Lupien, Keith, and Gary in view of the officially noted subject matter. Accordingly, the Examiner failed to provide a suggestion or motivation to modify Lupien, Keith, and Gary in view of the officially noted subject matter.

Accordingly, for the above reasons, the Examiner again failed to make a *prima facie* case of obviousness with respect to previously presented claims **9-12** and **21-24**.

5.3 Applicants have no burden to point out to the Examiner why the officially noted subject matter is not common knowledge or well-known in the art.

At page 12 of the Office Action the Examiner responded to the arguments made in the Amendment of January 25, 2007 regarding the Examiner’s taking of official notice. Specifically, the Examiner relied on 37 CFR 1.111(b) and In re Chevenard, 139 F.2d 711 (CCPA 1943), stating in part that to adequately traverse the Examiner’s position on official notice, “an applicant must specifically point out the supposed errors in the examiner’s action, which would include stating why the noticed fact is not considered to be common knowledge or well known in the art.” Office Action, page 12.

Notably, nothing compels an applicant to point out why the Examiner’s officially noted subject matter is not considered to be common knowledge or well known in the art. Specifically, 37 CFR 1.111(b) does not place such a burden on the applicant. Similarly, in In re Chevenard, the Court never held that an applicant has such a burden. In re Chevenard, 139 F.2d at 713 (the Court held that official notice is not traversable for the first time on appeal to court “[i]n the

absence of anything in the record to contradict the examiner's holding, and in the absence of any demand by appellant for the examiner to produce authority for his statement.”)

6.0 New claims 27-52.

New dependent claims **27-45** depend from independent claims **1** and **13** and as such, are nonobvious in view of Lupien, Keith, and Gary for at least the same reasons as claims **1** and **13**.

New independent claim **46** recites limitations similar to claim **1** and as such, claim **46** is nonobvious in view of Lupien, Keith, and Gary for at least the same reasons as claim **1**.

New independent claim **47** recites:

after receiving the plurality of bid-offer spreads and the plurality of orders:

selecting a first bid-offer spread from the plurality of bid-offer spreads;

calculating a first crossing price based on the first bid-offer spread;

matching orders associated with the first bid-offer spread at the first crossing price;

determining an order imbalance based on the matching of the orders;

selecting a second bid-offer spread from the plurality of bid-offer spreads;

calculating a second crossing price based on the second bid-offer spread; and

filling at least in part the order imbalance at the second crossing price using at least one order associated with the second bid-offer spread.

Lupien, Keith, and Gary, alone or in combination, do not teach, suggest, nor disclose claim **47**. New claims **48-52** depend from independent claim **47** and as such, are nonobvious in view of Lupien, Keith, and Gary for at least the same reasons as claim **47**.

7.0 Conclusion

Since Lupien, Keith, Gary fail to teach or suggest claims **1-2, 6-9, 12-13, 18-20, 25**, and **27-52**, we submit that these claims are clearly allowable. Favorable reconsideration and allowance of these claims are therefore requested.

We earnestly believe that this application is now in condition to be passed to issue, and such action is also respectfully requested. However, if the Examiner deems it would in any way facilitate the prosecution of this application, the Examiner is invited to telephone our undersigned representative at 212-294-7733.

Respectfully submitted,

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Date

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